

Deriv. 55087

Work Order ID 54161



Page 1

December 1, 2009 3:04:25 PM

Item ID: D117-762-041

Accept



Setup Start



Revision ID: A

Stop



Item Name: Replacement Skidtube

Start Date: 02/12/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 16/12/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

[Signature]

Date:

09-12-1

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3582

Rev A

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control:

Photocopy bluefile & type labels per PPP D117-762-041 CHG001

N/A *[Signature]*

110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Determine square end of tube and deburr
2-Drill #30 pilot holes using DT8678.
3- open holes to 5/16"

[Signature] 9-12-2

120

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

Bend tube as per program D3582 on CNC Bender and Dwg D3582. Use 5/16" locator pin on buggy "A".

[Signature] 9-12-2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng.	Approval QC Inspector
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NOTE: Date & initial all entries

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Setup Start
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Start Date: 02/12/2009 Start Qty: 1.00
Required Date: 16/12/2009 Req'd Qty: 1.00



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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start
Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 Skidtubes	Skidtubes	0.00							
Skidtubes	Memo 1-Cut Fwd end of the tube using DT8185 2-Cut Aft end using DT8185 3-Debur ends 4-Drill Aft Cap holes using DT8678 ***DO NOT OPEN AFT CAP HOLE*** 5-Locate DT 8973 & Drill Ground wire hole on top of Tube. 6-Install 3/16 cleco in Ground wire hole ,then d	0.00							
140 Skidtubes	Skidtubes	0.00							
Skidtubes	Memo 1-Weld fwd cap D2964 per dwg D3582 and QSI 004 A/R AL ROD Batch: <u>M112507</u> 2-Grind flush	0.00							
150 QC	QC10- Inspect visual per QSI004- ground welds	0.00							
Quality Control	Memo	0.00							

DP 9-12-2

DP 9-12-3

BE 09/12/07

2) 09/12/07

(40)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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For seq 1301 : 11/09/12/03

B54161

1-Cut Fwd end of the tube using DT8185

2-Cut Aft end using DT8185

3-Deburr ends

4-Drill Aft Cap holes using DT8678 ***DO NOT OPEN AFT CAP HOLE***

5-Locate DT 8973 & Drill Ground wire hole on top of Tube.

6-Install 3/16 cleco in Ground wire hole ,then drill all X-Bolt holes using 3/16" drill.

7-Drill pilot holes for wearplates using DT8974

8-Open wearplate holes to $\varnothing 19/64$ " (0.297") as per Dwg D3582.

9- open ground wear holes to 0.391" as per section B-B

10-Open Aft Cap holes using .209" drill.

11-Drill pilot holes for section D-D and E-E. Holes must be laid out by hand. Mark out Center line and make sure that 6.65 and 5.906 measurements are respected. Double check before drilling, do not open holes to finish size.

DD

9-12-7

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Required Date: 16/12/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

QC5- Inspect part completeness to step on W/O

0.00

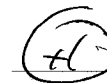


22809/12/02

QC

Memo

0.00



Quality Control

170

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

119/12/8

Hand Finishing

180

QC3- Inspect Part Finish

0.00



QC

Memo

0.00



31 09/12/08

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Setup Start



Stop



Start Date: 02/12/2009 Start Qty: 1.00

Cust Item ID:

Required Date: 16/12/2009 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 	Skidtubes	0.00							
Skidtubes	Memo	0.00							
Skidtubes	1-Open X-Bolt holes to .750"(4Places) as per Dwg D3582, section B-B 2-Counter Sink X-BOLT holes as per Dwg D3582 3-Deburr and blow out chips from inside of tube. 4-Bond web as per Dwg D3582 & QSI 015 A/R 241 Sike Flex Batch: M112395 Date 12/12/09								
200 	QC10- Inspect visual per QSI004- ground welds	0.00							
QC	Memo	0.00							
Quality Control									
210 	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									

M 9/12/08

5) Weld per dws X-bolt

6) grind flush

BE 09/12/09

AR M112860

DP 9-12-9

=> 8 or 12/10

=> 8 or 12/10

(40)

φ

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Start Date: 02/12/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 16/12/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

M112148

Memo

START TIME

OVEN TEMPERATURE: 320°

FINISH TIME: 8.05

0.00

BR 09-12-11

DL

230



QC

Quality Control

QC3- Inspect Part Finish

0.00

=> M 09-12-15

XL 8

Memo

0.00

240



HandFinish

Hand Finishing

HandFinishing

0.00

=> M 09-12-15

XL 8

Memo

0.00

Install Wearplate & Ground Wire inserts as per Dwg D3582.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Item ID:	D117-762-041	Accept		Setup	Start	
Revision ID:	A				Stop	
Item Name:	Replacement Skidtube					
Start Date:	02/12/2009	Start Qty:	1.00	Cust Item ID:		
Required Date:	16/12/2009	Req'd Qty:	1.00	Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250 	HandFinishing	0.00							
HandFinish	Memo	0.00							
Hand Finishing	1-Inspect for Foreign objects 2-Install Aft cap as per Dwg D3582, Detail "C" A/R 241 Sika Flex Batch: <u>M112345</u> Exp Date: <u>10/08</u> 3-Install Wearplates as per Dwg D3582, Note: Install Bolt and wa <i>W</i> <i>Wingwalk per drawing M112263</i>								
260 	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									
270 	Packaging	0.00							
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D117-762-041 Location: <u>PPP 5 4100</u> PPP Rev: <u>4100</u>								

1 *105.12.29*

Peropls

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Accept



Setup Start



Revision ID: A

Stop



Item Name: Replacement Skidtube

Start Date: 02/12/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 16/12/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/01/06
mf 10-01-05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

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Page 1

Work Order ID: 54161

Parent Item: D117-762-041RevA

Parent Item Name: Replacement Skidtube

Start Date: 02/12/2009

Required Date: 16/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2962-150RevA		Manufactured	No			110	Each	40.0000	1.0000			

3.540 Outer Tube, Extrud

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

40

27774

1

28672

39

D2964RevB

Manufactured

No

140

Each

32.0000

1.0000

Cap

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

32

14101

32

D2971RevA1

Manufactured

No

190

Each

39.0000

1.0000

Cross Bolt Spacer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

39

44445

39

D3584-1RevA

Manufactured

No

190

Each

0.0000

1.0000

Web

B 54349



1

11/12/18

DP 9-12-2

1

1

BE 09/12/07

1

BE 09/12/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

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Work Order ID: 54161



Parent Item: D117-762-041RevA



Parent Item Name: Replacement Skidtube

Start Date: 02/12/2009

Required Date: 16/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2973RevA		Manufactured	No			190	Each	213.0000	2.0000			

Cross Bolt Spacer

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

213

14636

213

190

Each

34.0000

1.0000



2 BE 09/12/09

D3662-3RevA

Manufactured

No



Crossbolt Spacer

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

34

44456

34

190

Each

24.0000

3.0000



1 BE 09/12/09

D3662-1RevA

Manufactured

No



Crossbolt Spacer

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

24

39022

6

39585

18

3 BE 09/12/09

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Parent Item: D117-762-041RevA

Parent Item Name: Replacement Skidtube

Start Date: 02/12/2009

Required Date: 16/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
ALS4-1032-130		Purchased	No			240	Each	2,957.000	36.0000			

Insert

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse	1111529	
ST	2957	
110511	2957	

x36 11/09-12-15

ALS4-428-165	Purchased	No				240	Each	42.0000	2.0000			
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Inserts

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FP	42	
(6989)	42	

x2 11/09-12-15

D2965RevB	Manufactured	No				250	Each	3.0000	1.0000			
-----------	--------------	----	--	--	--	-----	------	--------	--------	--	--	--

Cap, 105 Skidtube

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse	1352057	
FP4	2	
50924	2	
Main Warehouse		
ST	1	
43288	1	

x1 11/09-12-15

W/O:		WORK ORDER CHANGES					
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Comments:

Start Date: 02/12/2009

Required Date: 16/12/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3508-3RevC		Manufactured	No			250	Each	9.0000	1.0000			

Wearplate

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

FP21

9

51386

9

D3508-9RevC

Manufactured

No

250

Each

3.0000

1.0000



Wearplate

X1 M 09-12-15

Warehouse

Location

Loc Qty

Loc Code

Main Warehouse

ST

3

46596

3

D3558-3RevB

Manufactured

No

250

Each

14.0000

1.0000



Gasket

X1 M 09-12-15

Warehouse

Location

Loc Qty

Loc Code

Main Warehouse

ST

14

45661

2

51391

12

X1 M 09-12-15

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Comments:

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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
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D3558-9RevB		Manufactured	No			250	Each	15.0000	1.0000			
												
Gasket												

Warehouse Loc Qty Loc Code

Location


Main Warehouse

ST

15

50928

15

D3558-11RevB		Manufactured	No			250	Each	13.0000	1.0000			
												
Gasket												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST


13

40399

1

42254

12

D3558-13RevB		Manufactured	No			250	Each	10.0000	1.0000			
												
Gasket												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

10

40400

5

42255

5

X1 H 09-12-15

X1 H 09-12-15

X1 H 09-12-15

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Shop Packet Print

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Start Date: 02/12/2009

Required Date: 16/12/2009

Comments:

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Component Item ID Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
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D3508-11RevC		Manufactured	No			250	Each	7.0000	1.0000			
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Wearplate

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

7

40398

2

46880

5

D3508-13RevC		Manufactured	No			250	Each	6.0000	1.0000			
--------------	--	--------------	----	--	--	-----	------	--------	--------	--	--	--



Wearplate

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

6

42252

6

D3492-051RevC		Manufactured	No			250	Each	20.0000	2.0000			
---------------	--	--------------	----	--	--	-----	------	---------	--------	--	--	--



Plug Assembly

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

20

44633

20

X1 09-12-15

X1 09-12-15

X2 09-12-15

December 1, 2009 3:04:33 PM

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Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December 1, 2009 3:04:33 PM

Work Order ID: 54161

Parent Item: D117-762-041RevA

Parent Item Name: Replacement Skidtube


Start Date: 02/12/2009

Required Date: 16/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3492-049RevC		Manufactured	No			250	Each	16.0000	2.0000			
												

Plug Assembly

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST 16

40356 1

44632 15

D3492-053RevC

Manufactured No

250 Each 2.0000 6.0000



Plug Assembly

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST 2

44063 2

54161

K2 M 09-12-15

6 M 09-12-15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December 1, 2009 3:04:33 PM

Work Order ID: 54161

Parent Item: D117-762-041RevA

Parent Item Name: Replacement Skidtube



Start Date: 02/12/2009

Required Date: 16/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD10L 		Purchased	No			250	Each	5,463.000	2.0000			
Washer												

Warehouse	Loc Qty	Loc Code
<u>Location</u>		
Main Warehouse		
ST	5463	
101291	16	
104885	153	
105793	236	
109632	280	
110985	4778	

X2 20 09-12-15

AN3C4A



BOLT

Purchased

No

250

Each

1,327.000 28.0000



Warehouse	Loc Qty	Loc Code
<u>Location</u>		
Main Warehouse		
ST	1327	
112314	13	
112720	12	
112724	3	
112829	44	
112991	39	
113121	216	
113226	1000	

M 113359 *

X28 20 09-12-15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December 1, 2009 3:04:33 PM

Page 9

Work Order ID: 54161

Parent Item: D117-762-041RevA

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 02/12/2009

Required Date: 16/12/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN3C5A



Bolt

✓

Purchased

No

250

Each

1,011.000

2.0000



Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

1011

111424

8

111707

69

112314

1

112641

333

113121

300

113149

300

x 2 09-12-15

AN960JD416L



Washer

Purchased

No

250

Each

854.0000

2.0000



Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

854

107008

54

108138

4

108583

42

110153

354

112492

400

x 2 09-12-15

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Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 10

December 1, 2009 3:04:33 PM

Work Order ID: 54161

Parent Item: D117-762-041RevA

Parent Item Name: Replacement Skidtube

Start Date: 02/12/2009

Required Date: 16/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN960C10L		Purchased	No			250	Each	1,844.000	28.0000			
-----------	--	-----------	----	--	--	-----	------	-----------	---------	--	--	--



washer

Warehouse

Loc Qty

Loc Code

Location

OFFSHORE

FG

100

103585

100

Main Warehouse

ST

1744

112116

536

112612

342

112933

866

XZB 09-12-15

AN4-4A

Purchased

No

250

Each

121.0000

2.0000



Bolt

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

121

101291

3

106918

1

108138

60

111295

57

XZB 09-12-15

December 1, 2009 3:04:33 PM

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Page 10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 11

December 1, 2009 3:04:33 PM

Work Order ID: 54161

Parent Item: D117-762-041RevA

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 02/12/2009

Required Date: 16/12/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

NAS1611-012

Purchased

No

250

Each

62.0000

6.0000



O-RING

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

62

108673

62

NAS1611-015

Purchased

No

250

Each

22.0000

2.0000



O-RING

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

22

107178

22

NAS1611-016

Purchased

No

250

Each

69.0000

2.0000



O-RING

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

69

107178

19

112492

50

6 11/09-12-15

x2 11/09-12-15

x2 11/09-12-15

December 1, 2009 3:04:33 PM

Shop Packet Print

Page 11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

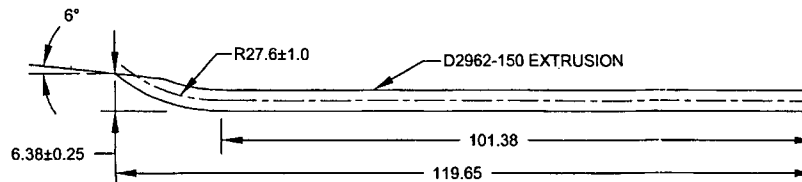
NOTE: Date & initial all entries

PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY

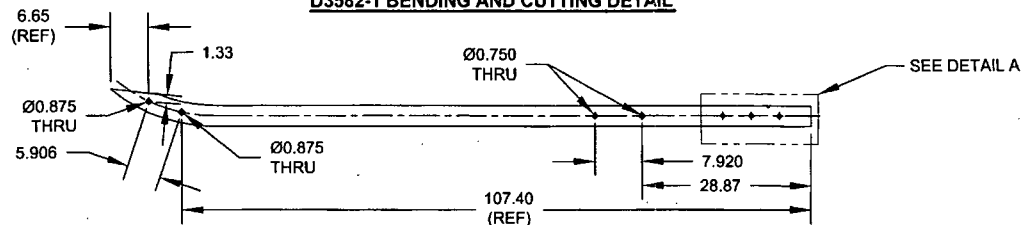
Qty	Part Number	Description
X	D3582-041	SKIDTUBE ASSEMBLY
1	D2962-150	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2971	CROSS BOLT SPACER
2	D2973	CROSS BOLT SPACER
2	D3492-049	PLUG ASSEMBLY
2	D3492-051	PLUG ASSEMBLY
6	D3492-053	PLUG ASSEMBLY
1	D3508-3	WEARPLATE
1	D3508-9	WEARPLATE
1	D3508-11	WEARPLATE
1	D3508-13	WEARPLATE
1	D3558-3	GASKET
1	D3558-9	GASKET
1	D3558-11	GASKET
1	D3558-13	GASKET
1	D3584-1	WEB
3	D3662-1	CROSS BOLT SPACER
1	D3662-3	CROSS BOLT SPACER
36	AELS-1032-130	INSERT
2	ALS7-428-165	INSERT
28	AN3C4A	BOLT
2	AN3-5A	BOLT
2	AN4-4A	BOLT
28	AN960C10L	WASHER
2	AN960JD10L	WASHER
2	AN960JD416L	WASHER

GENERAL NOTES:

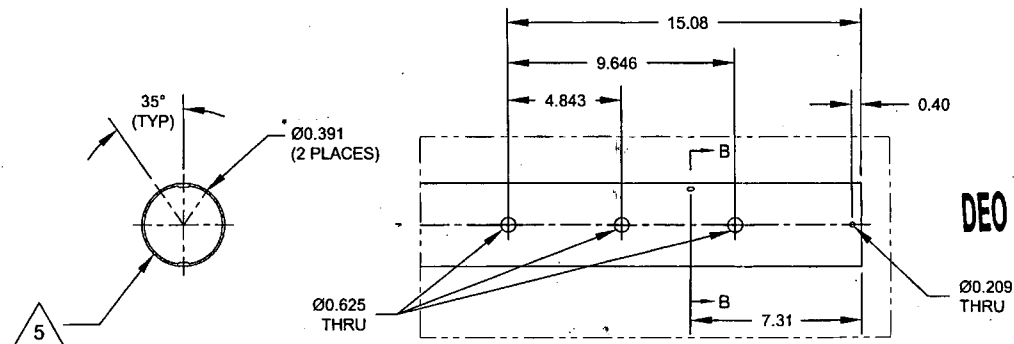
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- WELDING TO BE DONE PER DART QSI 004.
- INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL Ø0.297 HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS.
- FINISH:
 - CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB.
 - POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3.
 - ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4



D3582-1 BENDING AND CUTTING DETAIL



D3582-1 DRILLING DETAIL



SECTION B-B
SCALE 1:5

DETAIL A
SCALE 1:5

DEO ATTACHED

RELEASED
07.11.2008

SHOP COPY

RETURN TO

ENGINEERING

UNCONTROLLED COPY

SUBJECT TO AGENCY USE

WITHOUT NOTICE

WORK ORDER

NO. 54116-1
B2/09/12-1

REV.	DESCRIPTION	PH	DATE
A	NEW ISSUE	PH	07.06.08
DESIGN	BY	DATE	
DRAWN	BY	DATE	
CHECKED	BY	DATE	
MFG. APPR.	BY	DATE	
APPROVED	BY	DATE	
DE APPR.	BY	DATE	
DATE	07.06.08		

DART AEROSPACE USA, INC
PORT HADLOCK, WA

DRAWING NO. D3582

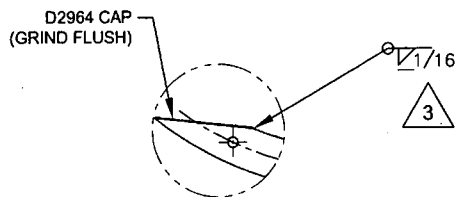
REV. A SHEET 1 OF 2

TITLE BK 117 SKIDTUBE ASSEMBLY

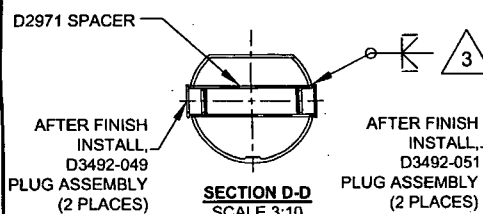
SCALE 1:20

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8 7 6 5 4 3 2 1



DETAIL C
SCALE 1:10



SECTION D-D
SCALE 3:10

SECTION D-D NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D2971 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.750 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-049 PLUG ASSEMBLY (2 PLACES)

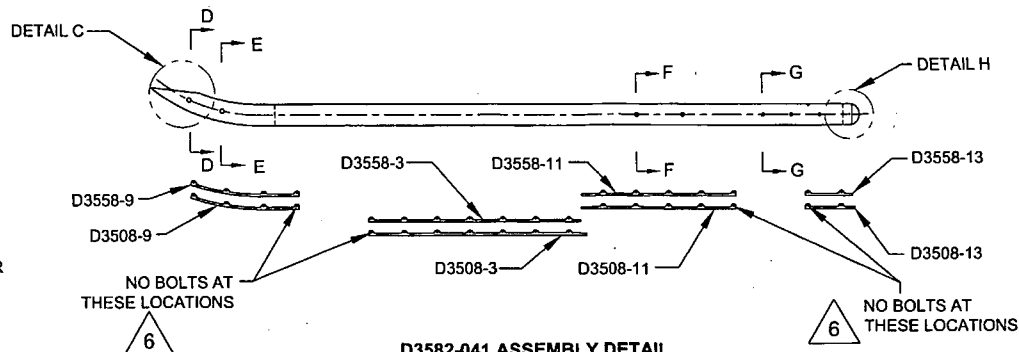


SECTION E-E
SCALE 3:10

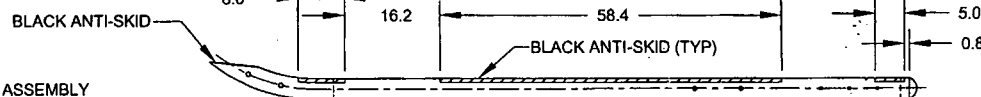
SECTION E-E NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

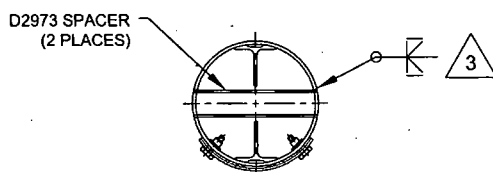
1. CHAMFER HOLE 0.030 x 45°
2. INSERT D3662-3 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.672 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-051 PLUG ASSEMBLY (2 PLACES)



D3582-041 ASSEMBLY DETAIL



D3582-041 BLACK ANTI-SKID DETAIL

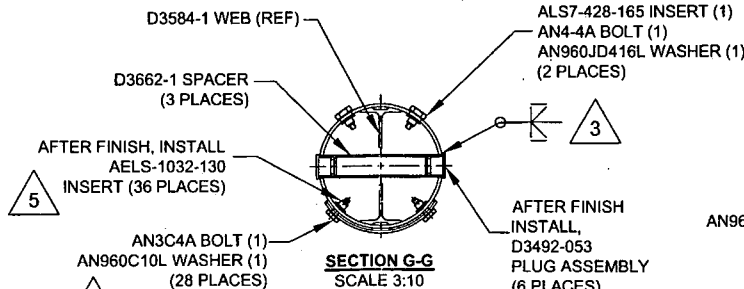


SECTION F-F
SCALE 3:10

SECTION F-F NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D2973 SPACER (2 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.625 DRILL TO REMOVE SPILL OVER

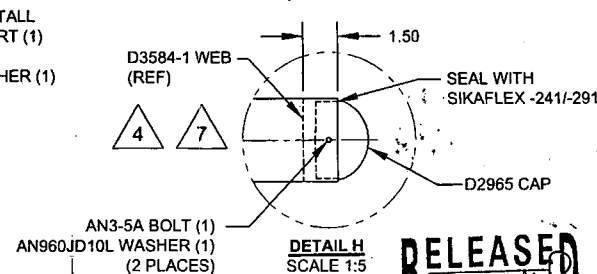


SECTION G-G
SCALE 3:10

SECTION G-G NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D3662-1 SPACER (3 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.515 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-053 PLUG ASSEMBLY (6 PLACES)



DETAIL H
SCALE 1:5

DEO ATTACHED

RELEASED

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	PH	PORT HADLOCK, WA	
CHECKED	PH	DRAWING NO. D3582	REV. A
MFG. APPR.	PH	SHEET 2 OF 2	
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	BK 117 SKIDTUBE ASSEMBLY	1:20
DATE	07.06.08	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

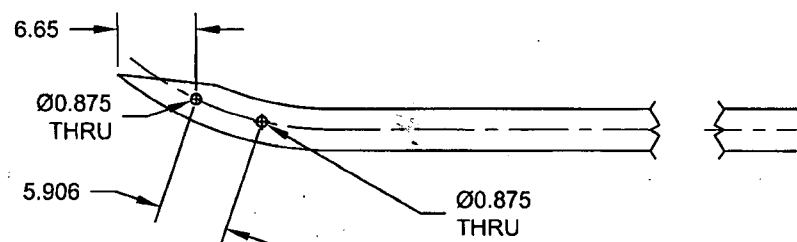
8 7 6 5 4 3 2 1

DRAWING NO. D3582	TITLE BK 117 SKIDTUBE ASSEMBLY	REV. A	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3582-A-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>PH</i>	CHECKED <i>A</i>	MFG. APPR. <i>E</i>	APPROVED <i>WD</i>		DE APPR. <i>MA</i>		
DATE 09.04.06	DATE 04.04.06	DATE 09.04.06	DATE 09/04/06		DATE 09.04.06		

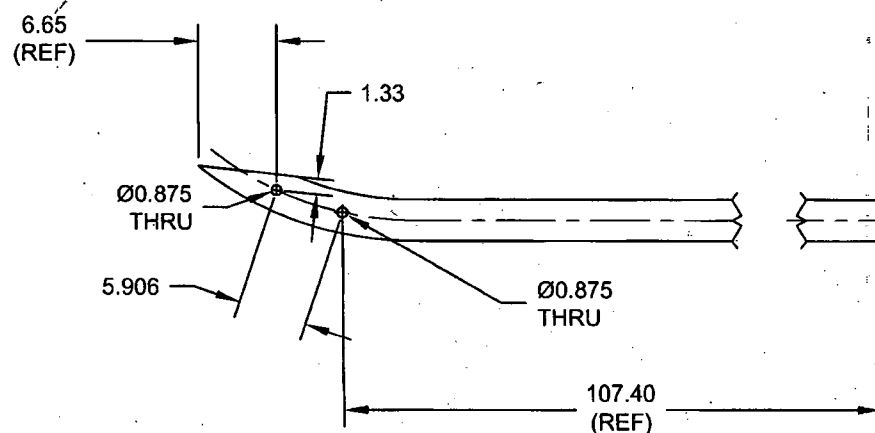
wlo 54141

FOR EASE OF MANUFACTURE AND TO ENSURE THE FIT OF BRISTOL WIRESTRIKE SKID GEAR DEFLECTOR:
UPDATE DIMENSIONING OF 2 FWD HOLES ON SHEET 1 AS SHOWN

IS:



WAS:



RELEASED
09/04/22 *WD*

NO. 220

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 54161
Part number: D17-762-041
Description: 17 sk.d tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier P.D. Date of Test Coupon 09/12/10

Welder Barclay Elliott Date of Test Coupon 09/12/10

The above named individual is qualified in accordance with AWS D17.1.2001 to weld